

## REMARKS

In the Office Action of 10 June 2009 and the Advisory Action of 26 October 2009, Claims 17-34 were pending with none of the claims yet indicated allowable. Applicant respectfully requests reconsideration for the reasons below.

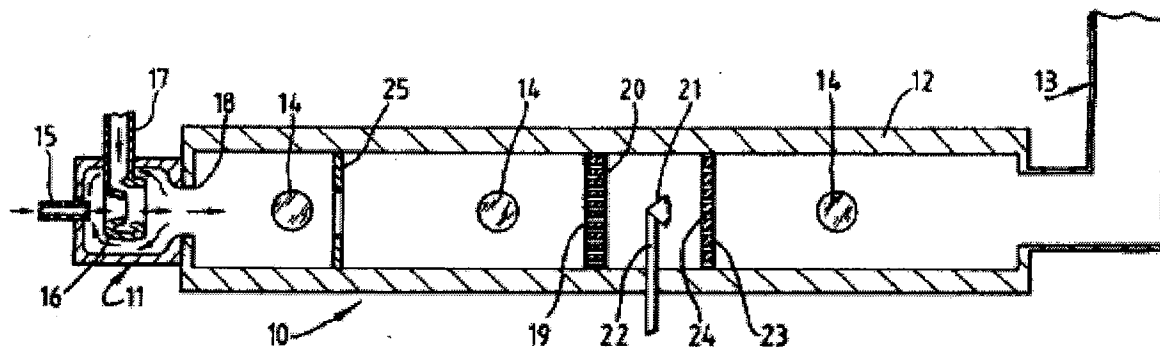
### Claim Amendments

Claims 17 and 25 are amended to recite *coal-burning power plant*. Support for this amendment may be found throughout the specification as filed, e.g., page 14, line 4 and the examples. This amendment is made without disclaimer in the interest of advancing prosecution. Entry is respectfully requested.

### 35 U.S.C. § 103 Rejections

Claims 17-34 were rejected under 35 U.S.C. § 103 as obvious over U.S. Patent No. 4,375,949 ("Salooja") in view of U.S. Patent No. 4,029,752 ("Cahn"), and in further view of United States Patent No. 4,196,057 ("May"), United States Patent No. 5,011,516 ("Altman"), and Applicant's admitted prior art. Reconsideration and allowance is respectfully requested for the reasons below.

All claims are rejected, at least in part, based on Salooja. Applicant previously noted that, although Salooja discloses a combustion system, Salooja's system is structurally and functionally divergent from methods and systems of Applicant's inventions. Salooja's Figure 1 is provided below for the Office's convenience:



Salooja's disclosure is in reference to small combustion systems (e.g., small dimensions, small mass flow rates, etc) having a disclosed diameter of about 61 cms and a length of about 127 cms (col. 9, lines 54-57). Particularly, Salooja experimented with dimensions ranging from 127 to about 190 cms in length and from 12 to 61 cms in diameter. Salooja found that, within such small systems, variances in diameter of a few cms can produce significant differences in output results (col. 9, line 66 – col. 10, line 26). Salooja states that "what has now been discovered is that a far greater reduction in carbon-forming tendency can be achieved by careful design of the combustion chamber" (col. 9, lines 22-25) and that "with a *suitably designed combustion chamber*, in conjunction with a suitable burner, a clean, highly reducing atmosphere can be generated..." (col. 9, lines 25-28; emphasis added). In short, Salooja is primarily directed to using combustion chamber *design*..

By way of contrast, the currently amended independent claims are directed to methods for *coal-burning power plants*. Coal-burning power plants are orders of magnitude larger than Salooja's disclosed combustion systems in both length and width, and operate with completely different fuel feed rates, volumes and fluid dynamics. For example, Salooja's systems are also designed to operate at very low fuel feed rates, e.g., of about 9 to about 11 liters per hour (col. 9, line 66 – col. 10, line 26). Power plants commonly burn coal at a rate of 250 tons per hour (approximately 707,921 liters per hour for rough comparison to Salooja's system). Applicant believes the currently amended claims sufficiently address the Office's concerns regarding claim scope as outlined in the Advisory Action and reconsideration is requested.

Applicant also believes it is well established that a *prima facie* case of obviousness requires a reasonable expectation of success. Because Salooja found that even changes of a few centimeters can result in significant differences in output results (as noted above), applicant respectfully fails to see how Salooja's disclosure can be expected to perform successfully in a coal-burning power plant that is (1) orders of magnitude larger; (2) burning a different fuel; and (3) burning fuel at a different feed rate. For at least these reasons, favorable reconsideration is requested.

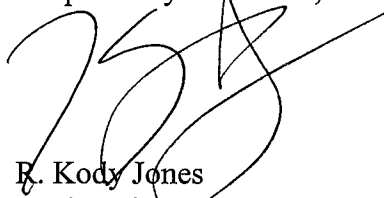
In addition, it is worth noting that Salooja actually teaches away from methods that rely on *adjustment*, in particular, burner adjustment, as requiring "complex and expensive subsidiary control devices" (col. 9, lines 30-48). Rather than *adjusting* its system, Salooja touts the benefit of a modified chamber of narrow diameter.

As noted previously, the other references are unable to overcome the shortcomings in the Office's primary reference. Accordingly, allowance of all claims herein is respectfully requested.

**Conclusion**

Applicant notes that because Applicant has addressed certain concerns of the Office does not mean that Applicant concedes other comments of the Office. Furthermore, in the interest of clarity and brevity, the fact that Applicant has made arguments for the patentability of some claims does not necessarily suggest that there are not additional supportive grounds for the patentability of those or other claims. However, if any issue remains unresolved, Applicants' representative would welcome the opportunity for a telephone interview to expedite allowance and issue.

Respectfully submitted,



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